

Sharebrook Estate and Safari Park



Sharebrook Estate and Safari Park

Task Scenario

You have been asked to create a database for Sharebrook Estate and Safari Park. The attractions include a private rail track. It has an old steam engine and two carriages that are used for events. Evening Christmas events have been planned for 20 to 22 December. The database will record information about:

- events
- customers
- event sales.

Each event has a different ticket price.

There are two types of seat: seats without tables and seats with tables.

There must be at least one ticket purchased with each sale.

A sale cannot exceed eight tickets.



Examining the data

| Seat Sale ID | Event ID | Customer ID | Event Description | Surname | Event Date | House Number | Postcode | Seat Type | Event Ticket Price | Num Tickets |
|--------------|----------|-------------|--------------------|----------|------------|--------------|----------|-----------|--------------------|-------------|
| 1 | 1 | 1 | Christmas Songtime | Bell | 20/12/2021 | 7 | FE3 1LM | Table | £10.00 | 2 |
| 2 | 1 | 2 | Christmas Songtime | Squires | 20/12/2021 | 12 | ME3 2GG | No Table | £10.00 | 1 |
| 3 | 2 | 3 | The Polar Express | Hudson | 21/12/2021 | 1 | FE3 5HJ | Table | £15.00 | 4 |
| 4 | 2 | 72 | The Polar Express | Williams | 21/12/2021 | 6a | ME4 2LS | No Table | £15.00 | 2 |
| 6 | 3 | 1 | Home Alone | Bell | 22/12/2021 | 7 | FE3 1LM | Table | £12.50 | 4 |
| 7 | 3 | 69 | Home Alone | Ferguson | 22/12/2021 | Greylands | DL8 1TH | No Table | £12.50 | 8 |

Examining the Data - Questions:

What data type would you set for House Number?

How many different events are there?

How many different customers are there?

How many different seat types are there?

Which data is repeated?

What tables are required?

Which fields belong to which table?

Deciding on a database structure

Event ID

Event Description
Event Date
Event Ticket Price

Seat Sale ID

Seat Type
Num Tickets

Customer ID

Surname
House Number
Postcode

Question - in the Seat Sale Table - how do we know which Event is being booked?

Question - in the Seat Sale Table - how do we know who is booking?

Deciding on a database structure

Event ID

Event Description
Event Date
Event Ticket Price

Seat Sale ID

Event ID
Customer ID
Seat Type
Num Tickets

Customer ID

Surname
House Number
Postcode

Question - in the Seat Sale Table - how do we know which Event is being booked?

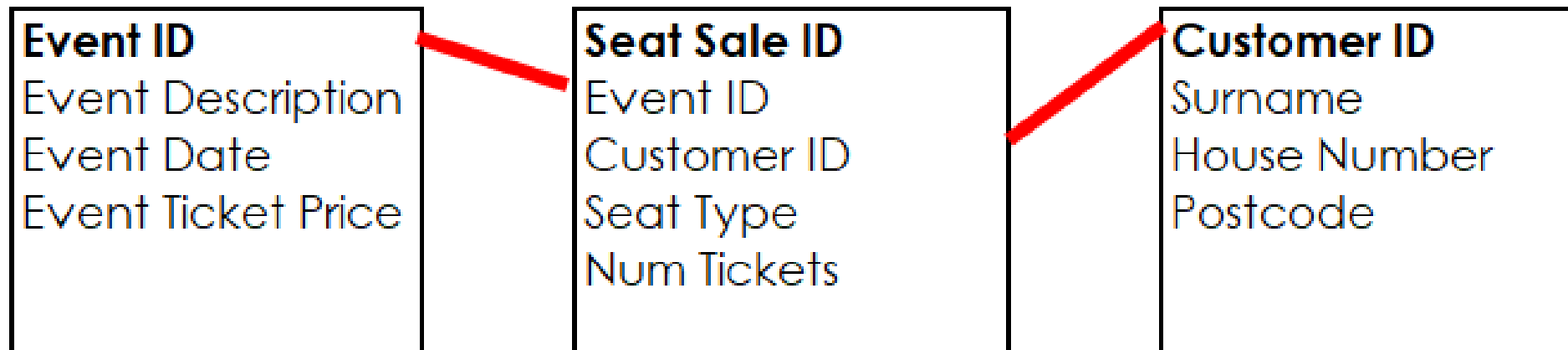
Answer - by putting the Event ID in the Seat Sale Table

Question - in the Seat Sale Table - how do we know who is booking?

Answer - by putting the Customer ID in the Seat Sale Table

Question: How do we link (relate) the tables?

Creating Relationships



Question: How do we link (relate) the tables

Answer: Through common fields (Key fields)

Activity 1: Database relationships screenprint (45 minutes) - 8 marks

Activity 1: Database relationships screenprint (45 minutes)

Study the data extract provided in **Figure 1**. Create an efficient database structure that:

- minimises data duplication
- accepts the data provided
- uses recognised naming conventions
- ensures data integrity.

Ensure you use **all** and **only** the fields shown in **Figure 1**.

Screen print your database relationships.

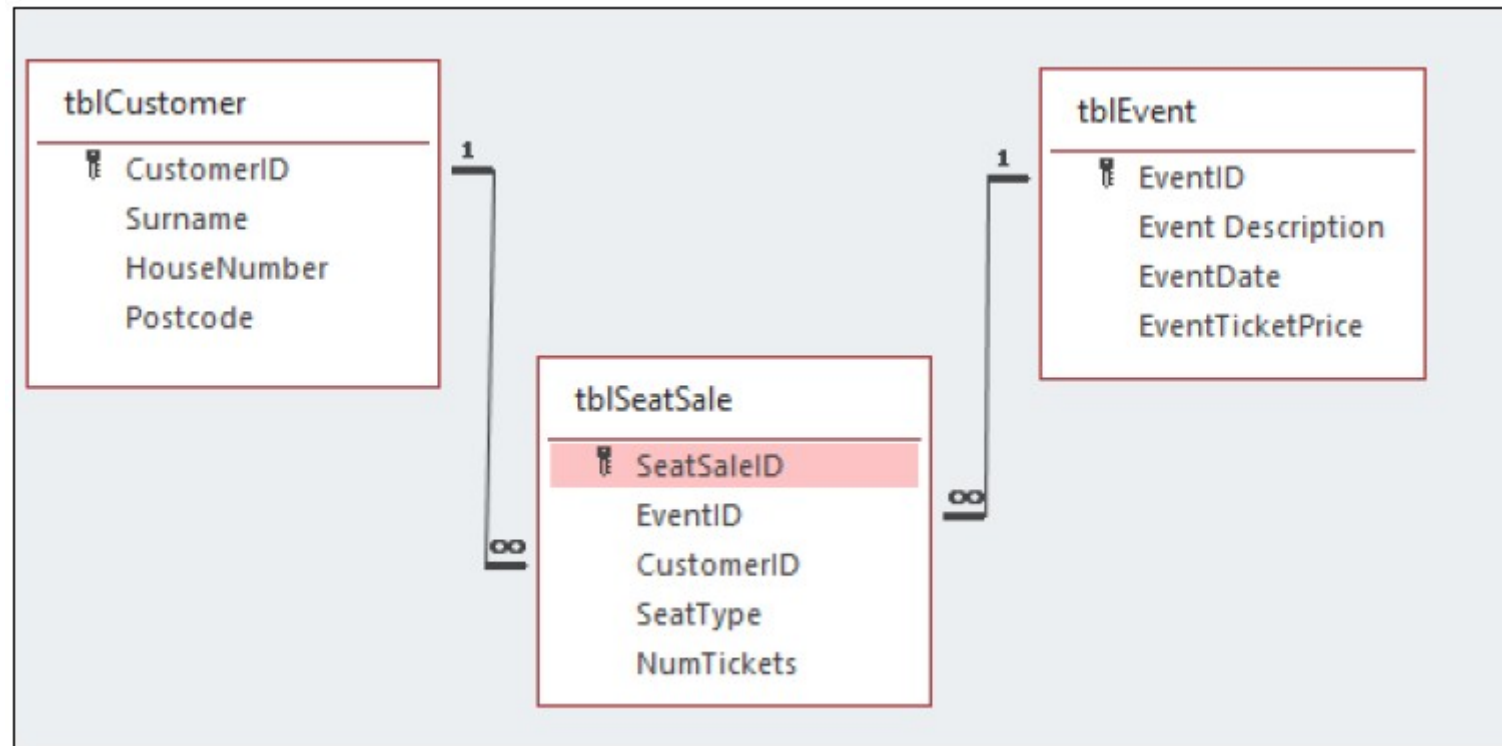
You are advised to spend 45 minutes on this activity.

Activity 1 explained

Create an efficient database structure that:

- minimises data duplication - this is achieved by creating a sensible structure (tables)
- accepts the data provided – this is achieved by selecting the correct data types and field sizes
- uses recognised naming conventions – using the correct prefixes – e.g. tblCustomer
- ensures data integrity – a structure that requires minimal repetition of data

Activity 1: Database relationships screenprint (45 minutes) - 8 marks - **answers**



Activity 2: Table structures and validation (45 minutes) - 8 marks

Create efficient table structures based on Activity 1 and the data shown in **Figure 1**.

The table structures must use suitable validation to meet these requirements:

1. A record will not save without the surname, house number and postcode of the customer being present
2. A record will not save if the postcode is not in the correct format
3. A record will not save if the event selected is invalid
4. A record will not save if the seat type is invalid
5. A record will not save if the number of tickets purchased is below the accepted range
6. A record will not save if the number of tickets purchased is above the accepted range

Input the data you have been given into your relational database.

Activity 2: Table structures and validation (45 minutes) - 8 marks - **answers**

Table Structures

Add screenprints of each of your tables in design view showing the table names, field names and data types ONLY

| tblCustomer | |
|-------------|------------|
| Field Name | Data Type |
| CustomerID | Number |
| Surname | Short Text |
| HouseNumber | Short Text |
| Postcode | Short Text |

| tblEvent | |
|-------------------|------------|
| Field Name | Data Type |
| EventID | AutoNumber |
| Event Description | Short Text |
| EventDate | Date/Time |
| EventTicketPrice | Currency |

| tblSeatSale | |
|-------------|------------|
| Field Name | Data Type |
| SeatSaleID | AutoNumber |
| EventID | Number |
| CustomerID | Number |
| SeatType | Short Text |
| NumTickets | Number |

Activity 2: Table structures and validation (45 minutes) - 8 marks

1. A record will not save without the surname, house number and postcode of the customer being present - Presence Check (Required or Validation Rule)

Example: Customer Name

| General Lookup | |
|---------------------|---------------------------------------|
| Field Size | 20 |
| Format | |
| Input Mask | |
| Caption | |
| Default Value | |
| Validation Rule | Is Not Null |
| Validation Text | You must enter the customer's surname |
| Required | No |
| Allow Zero Length | Yes |
| Indexed | No |
| Unicode Compression | Yes |
| IME Mode | No Control |
| IME Sentence Mode | None |
| Text Align | General |

Activity 2: Table structures and validation (45 minutes) - 8 marks

2. A record will not save if the postcode is not in the correct format -
Format Check (Input Mask)

| Character | Meaning |
|-----------|---|
| > | Converts all characters that follow to uppercase |
| L | Must enter a letter |
| 0 | Must enter a digit (0-9) |
| \ | Characters immediately following will be displayed literally (e.g. space) |

| General Lookup | |
|---------------------|--|
| Field Size | 7 |
| Format | |
| Input Mask | > LLO\ OLL |
| Caption | |
| Default Value | |
| Validation Rule | Is Not Null |
| Validation Text | You must enter the customer's postcode |
| Required | No |
| Allow Zero Length | Yes |
| Indexed | Yes (Duplicates OK) |
| Unicode Compression | Yes |
| IME Mode | No Control |
| IME Sentence Mode | None |
| Text Align | General |

Input Masks

A copy is in
your Notebook

| Character | Explanation |
|-----------|---|
| 0 | User must enter a digit (0 to 9). |
| 9 | User can enter a digit (0 to 9). |
| # | User can enter a digit, space, plus or minus sign. If skipped, Access enters a blank space. |
| L | User must enter a letter. |
| ? | User can enter a letter. |
| A | User must enter a letter or a digit. |
| a | User can enter a letter or a digit. |
| & | User must enter either a character or a space. |
| C | User can enter characters or spaces. |
| .,;:- / | Decimal and thousands placeholders, date and time separators. The character you select depends on your Microsoft Windows regional settings. |
| > | Coverts all characters that follow to uppercase. |
| < | Converts all characters that follow to lowercase. |
| ! | Causes the input mask to fill from left to right instead of from right to left. |
| \ | Characters immediately following will be displayed literally. |
| "" | Characters enclosed in double quotation marks will be displayed literally. |

Activity 2: Table structures and validation (45 minutes)

8 marks

3. A record will not save if the event selected is invalid - Validation Rule

Event Description

| General Lookup | |
|---------------------|---|
| Field Size | 60 |
| Format | |
| Input Mask | |
| Caption | |
| Default Value | |
| Validation Rule | "Christmas Songtime" Or "The Polar Express" Or "Home Alone" |
| Validation Text | You must enter an appropriate event description |
| Required | No |
| Allow Zero Length | Yes |
| Indexed | No |
| Unicode Compression | No |
| IME Mode | No Control |
| IME Sentence Mode | None |
| Text Align | General |

Activity 2: Table structures and validation (45 minutes)

8 marks

4. A record will not save if the seat type is invalid

Seat Type

| tblCustomer tblEvent tblSeatSale | | | | | | |
|--|---------|------------|----------|------------|--------------|--|
| SeatSaleID | EventID | CustomerID | SeatType | NumTickets | Click to Add | |
| 1 | 1 | 1 | Table | 2 | | |
| 2 | 1 | 2 | Table | 1 | | |
| 3 | 2 | 3 | No Table | 4 | | |
| 4 | 2 | 72 | No Table | 2 | | |
| 5 | 3 | 1 | Table | 4 | | |
| 6 | 3 | 69 | No Table | 8 | | |
| * | (New) | | | 0 | | |

Activity 2: Table structures and validation (45 minutes)

8 marks

- 5. A record will not save if the number of tickets purchased is below the accepted range
- 6. A record will not save if the number of tickets purchased is above the accepted range

Number of Tickets

| General Lookup | |
|-------------------|---|
| Field Size | Long Integer |
| Format | |
| Decimal Places | Auto |
| Input Mask | |
| Caption | |
| Default Value | 0 |
| Validation Rule | Is Not Null And Between 1 And 8 |
| Validation Text | Must be at least 1 ticket bought and no more than 8 |
| Required | No |
| Indexed | Yes (Duplicates OK) |
| Text Align | General |

Activity 2: Table structures and validation (45 minutes)

8 marks

Additional Validation - Table lookup:

On 'Foreign Keys'

| tblSeatSale | | | | | |
|-------------|---------|--------------------|------------|------------|--------------|
| SeatSaleID | EventID | CustomerID | SeatType | NumTickets | Click to Add |
| 1 | 1 | 1 | Table | 2 | |
| 2 | 1 | Christmas Songtime | 20/12/2019 | £10.00 | |
| 3 | 2 | The Polar Express | 21/12/2019 | £15.00 | |
| 4 | 3 | Home Alone | 22/12/2019 | £12.50 | |
| 5 | 3 | 1 Table | | 4 | |
| 6 | 3 | 69 No Table | | 8 | |
| * | (New) | | | 0 | |

See 'How to' on the next slide.

Activity 2: Table structures and validation (45 minutes)

8 marks

Additional Validation - Table lookup on tblSeatSale:

On 'Foreign Keys'

The purpose is to help the user to identify the correct ID number when entering data

| tblSeatSale | | | | | |
|-------------|---------|--------------------|----------|------------|--------------|
| SeatSaleID | EventID | CustomerID | SeatType | NumTickets | Click to Add |
| 1 | 1 | 1 | Table | 2 | |
| 2 | 1 | Christmas Songtime | | 20/12/2019 | £10.00 |
| 3 | 2 | The Polar Express | | 21/12/2019 | £15.00 |
| 4 | 3 | Home Alone | | 22/12/2019 | £12.50 |
| 5 | 3 | 1 | Table | 4 | |
| 6 | 3 | 69 | No Table | 8 | |
| * (New) | | | | 0 | |

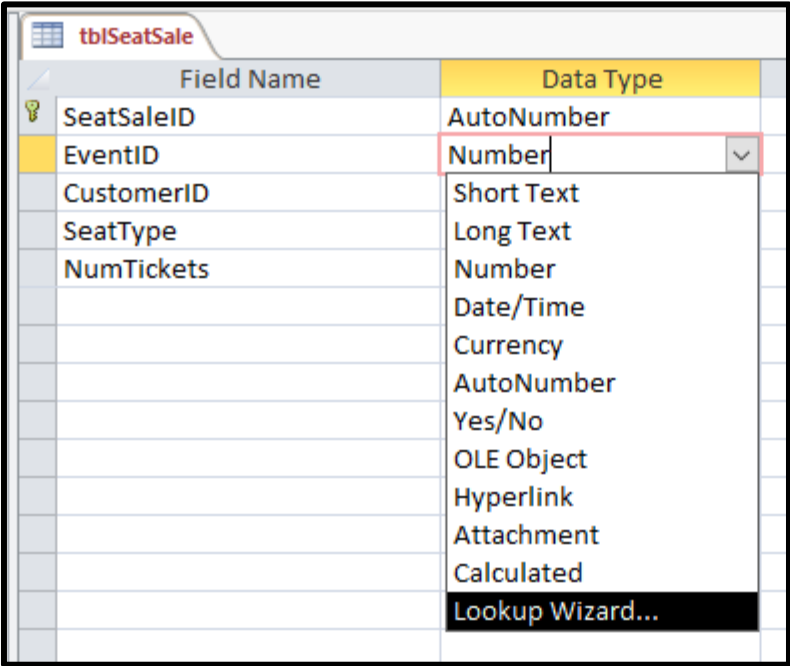
See 'How to' on the next slide.

How to: Table lookup on tblSeatSale:

On tblSeatSale, select 'EventID' and choose 'Lookup Wizard'. Note that if you have already created relationships you will be prompted to delete these first.

In the first window of the wizard, select 'I want the lookup field to get the values from another table or query'

In the next window choose tblEvent (where event details are stored) - then choose the fields that you want to see in the lookup list. Finally, unhide the key column and stretch the columns so all data can be seen. Click finish, add relationships



| Field Name | Data Type |
|------------|------------------|
| SeatSaleID | AutoNumber |
| EventID | Number |
| CustomerID | Short Text |
| SeatType | Long Text |
| NumTickets | Number |
| | Date/Time |
| | Currency |
| | AutoNumber |
| | Yes/No |
| | OLE Object |
| | Hyperlink |
| | Attachment |
| | Calculated |
| | Lookup Wizard... |

b. Lookup Wizard

This wizard creates a lookup field, which displays a list of values you can choose from. How do you want your lookup field to get its values?

☒ I want the lookup field to get the values from another table or query.

☐ I will type in the values that I want.

Cancel < Back Next > Finish

Lookup Wizard

Which fields of tblEvent contain the values you want included in your lookup field? The fields you select become columns in your lookup field.

Available Fields:

Selected Fields:

EventID
Event Description
EventDate
EventTicketPrice

Cancel < Back Next > Finish

Lookup Wizard

How wide would you like the columns in your lookup field?

To adjust the width of a column, drag its right edge to the width you want, or double-click the right edge of the column heading to get the best fit.

☐ Hide key column (recommended)

| EventID | Event Description | EventDate | EventTicketPrice |
|---------|--------------------|------------|------------------|
| 1 | Christmas Songtime | 20/12/2019 | £10.00 |
| 2 | The Polar Express | 21/12/2019 | £15.00 |
| 3 | Home Alone | 22/12/2019 | £12.50 |

Cancel < Back Next > Finish

Activity 2: Table structures and validation (45 minutes)

8 marks

Screen Prints for Activity 2:

Display your screenprints on your Notebook to show:

- the design view of each table showing the structure, including the fields and data types
- validation including a suitable example for each of these:
 - o presence check
 - o length check
 - o value lookup or range check
 - o table lookup
 - o format check.

Activity 3: Queries and Report (40 mins) - 12 marks

Queries

- a) Create a query to display an alphabetically sorted list of the events running on the 20th and 21st of December. It must show event description and event ticket price only.
- b) Create a query that will calculate:
 - i. the number of table tickets sold
 - ii. the income for the tickets sold.

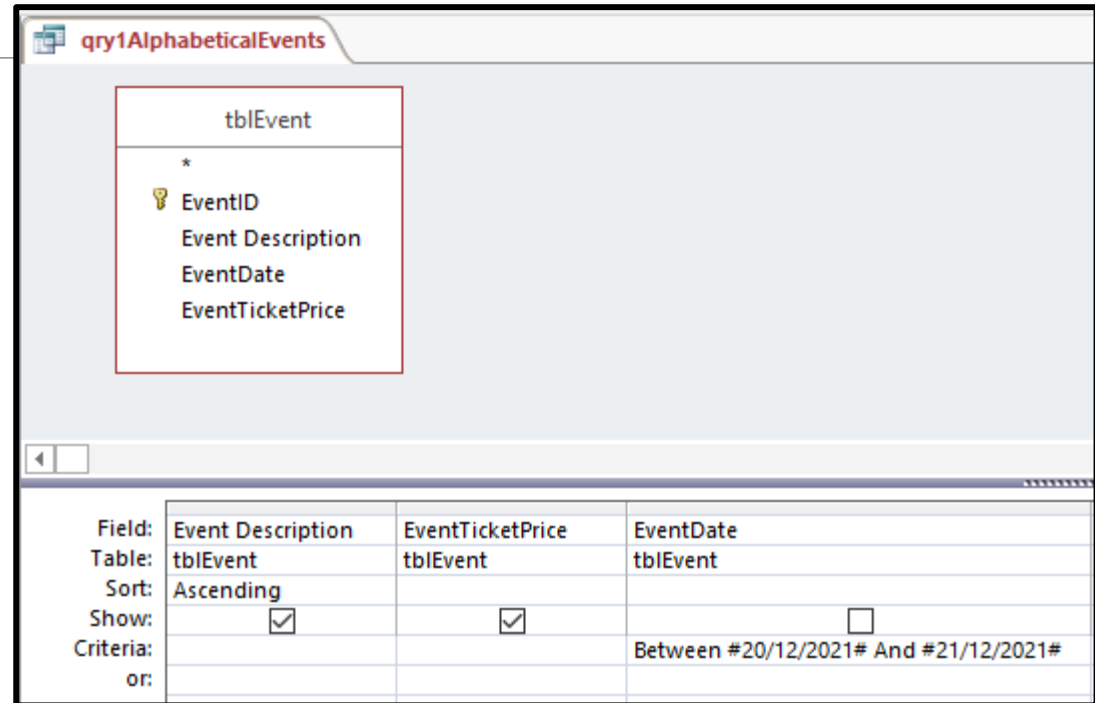
Display:

- the event description
- the number of table seat tickets sold
- the income generated.

Activity 3: Queries and Report (40 mins) - 12 marks

Queries

- a) Create a query to display an alphabetically sorted list of the events running on the 20th and 21st of December. It must show event description and event ticket price only.



See 'How to' on the next slide

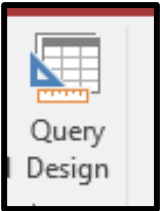
The screenshot shows the Query View for a query named 'qry_AlphabeticalEvents'. The query results are displayed in a table with two columns: 'Event Description' and 'EventTicketPrice'. The results are sorted alphabetically by event description.

| Event Description | EventTicketPrice |
|------------------------------------|------------------|
| Sing A Long Christmas Extravaganza | £10.00 |
| The Polar Express Extravaganza | £10.00 |
| * | £0.00 |

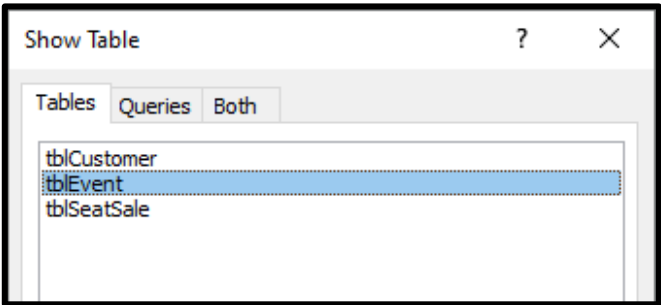
- a) Create a query to display an alphabetically sorted list of the events running on the 20th and 21st of December. It must show event description and event ticket price only.

‘How to’:

Click on the ‘Create’ menu and select ‘Query Design’



The window that opens asks you to select the required table to return the necessary information. In this case we only need tblEvent – double click or use the ‘Add’ button.

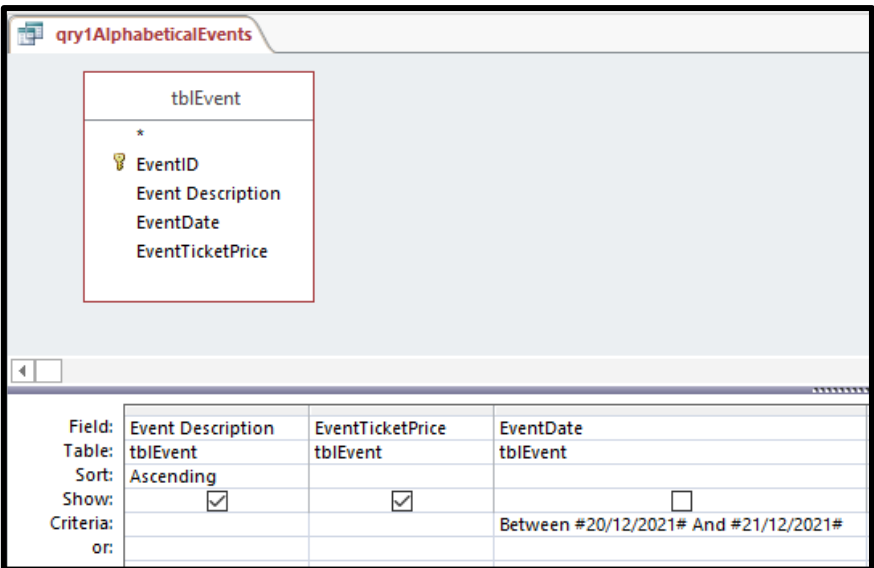


Double click on the fields required to return the requested information – they will appear in the ‘query grid’ below. Read the instruction carefully so that you only choose relevant fields – Event Description, Event Ticket Price and Event Date

Type the criteria Between 20/12/2021 and 21/12/2021 under the Event Date. Untick the ‘Show’ box (date not required to show).

Run the query to test that only two records show.

Name the report qryAlphabeticalEvents



Activity 3: Queries and Report (40 mins) - 12 marks

Queries

- b) Create a query that will calculate:
- the number of table tickets sold
 - the income for the tickets sold.

Display:

- the event description
- the number of table seat tickets sold
- the income generated.

See 'How to' on next slides

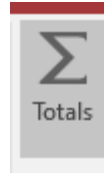
| Event Description | TableTicketsSold | Income |
|--------------------|------------------|--------|
| Christmas Songtime | 2 | £20.00 |
| Home Alone | 4 | £50.00 |
| The Polar Express | 4 | £60.00 |

- b) Create a query that will calculate:
- the number of table tickets sold
 - the income for the tickets sold.

'How To'

Step 1: Select 'Create' and 'Query Design' and create the query as shown. Add the criteria 'Table as shown' (remove the tick from show). Note that initially 6 records will be returned until we do some grouping.

Step 2: Click on the 'Totals' button – this will give extra row in the query to do some calculations.



Step 3 – in the 'Total' row, under NumTickets, choose 'Sum'. This will address bullet point 2 of the question.

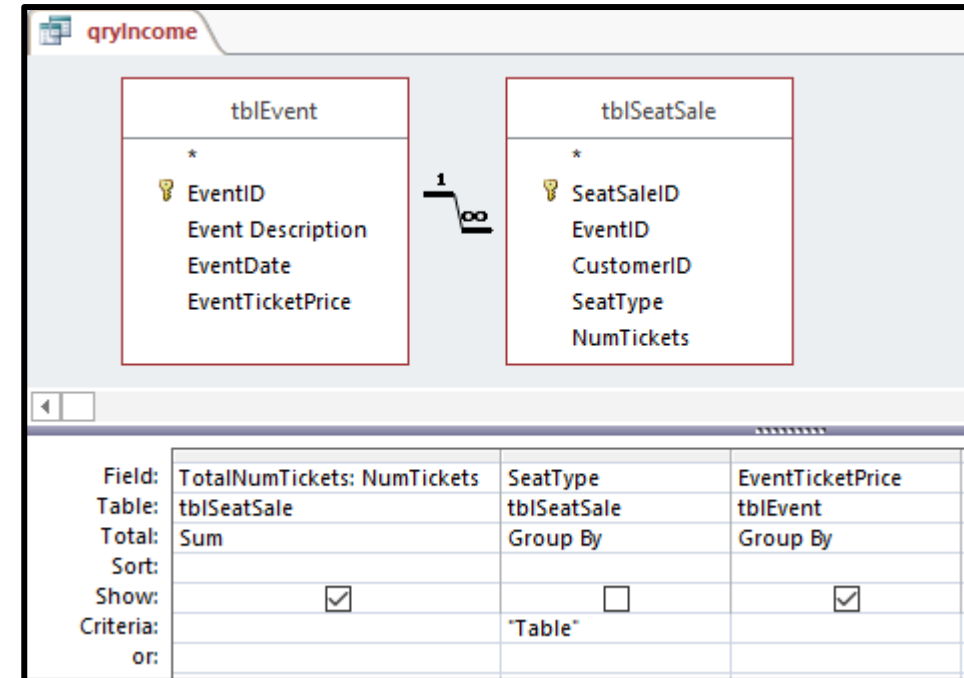
Note that when you run the query it changes the name of the calculated field to 'SumOfNumTickets'.

You can change this easily to something more sensible.

See next slide

Display:

- the event description
- the number of table seat tickets sold
- the income generated.



| Event Description | SumOfNumTickets | EventTicket |
|--------------------|-----------------|-------------|
| Christmas Songtime | 2 | £10.00 |
| Home Alone | 4 | £12.50 |
| The Polar Express | 4 | £15.00 |

- b) Create a query that will calculate:
- the number of table tickets sold
 - the income for the tickets sold.

'How To'

Step 4: Change the name of the calculated field – note that you will want to use this name in the next step. Click into 'Design' view. Type a name 'TotalNumTickets:' in front of the field NumTickets – don't forget the colon (:).

Step 5: Calculate the income generated (third bullet point). In a spare column (column 5) you will type in the required calculation. We want to multiply the total number of tickets sold by the ticket price to work out the total income.

Type in: TotalNumTickets*EventTicketPrice

Note that * means multiply. Square brackets will be automatically added.

You can change the name 'Expr1' as above

Display:

- the event description
- the number of table seat tickets sold
- the income generated.

qryIncome

| Field: | Event Description | TotalNumTickets: NumTickets | SeatType | EventTicketPrice |
|-----------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Table: | tblEvent | tblSeatSale | tblSeatSale | tblEvent |
| Total: | Group By | Sum | Group By | Group By |
| Sort: | | | | |
| Show: | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Criteria: | | | "Table" | |
| or: | | | | |

| |
|---|
| Expr1: [TotalNumTickets]*[EventTicketPrice] |
| Expression |
| <input checked="" type="checkbox"/> |

- b) Create a query that will calculate:
- the number of table tickets sold
 - the income for the tickets sold.

'How To'

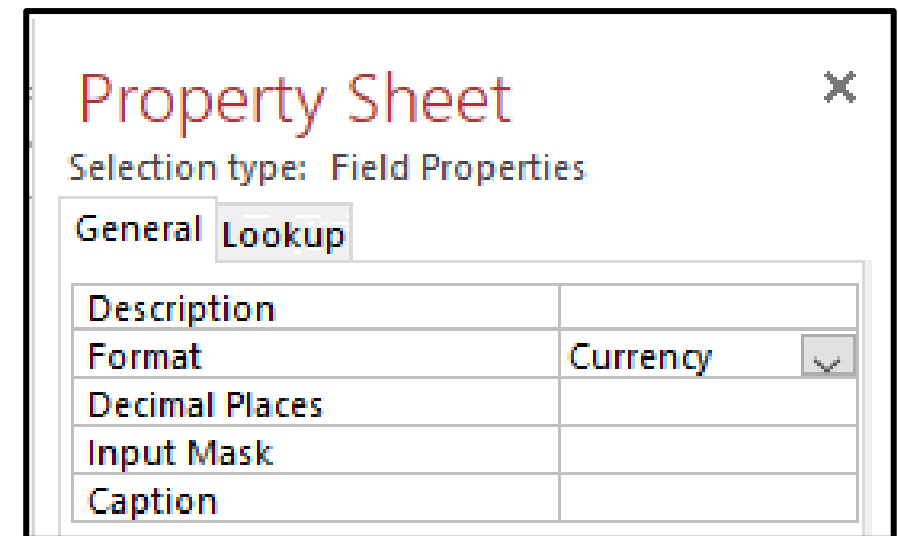
Step 6: Change the format of the income generated to currency. Click in that field and select 'Property Sheet'. You will see the property sheet of the selected field on the right hand side of the screen. Select 'Currency' in the 'Format' property.

View the results

| qryIncome | | | | |
|--------------------|-----------------|-------------|--------|--|
| Event Description | TotalNumTickets | EventTicket | Income | |
| Christmas Songtime | 2 | £10.00 | £20.00 | |
| Home Alone | 4 | £12.50 | £50.00 | |
| The Polar Express | 4 | £15.00 | £60.00 | |

Display:

- the event description
- the number of table seat tickets sold
- the income generated.



Activity 3: Queries and Report (40 mins) - 12 marks

Report (based on a Query)

- c) Create a report that shows ticket sales for the events. For each event calculate:
- the number of customers who have purchased tickets
 - the number of table tickets purchased
 - the number of non table tickets purchased
 - the total number of tickets purchased

Display:

- a suitable report title
- the event descriptions
- the number of customers who have purchased tickets
- the number of table tickets purchased for each event
- the number of non table tickets purchased for each event
- the total number of tickets purchased for each event

The report must fit on one page. **Important note:** you will need to convert the report to a pdf and save in your folder – next step (item d)

c) Create a report that shows ticket sales for the events. For each event calculate:

- the number of customers who have purchased tickets
- the number of table tickets purchased
- the number of non-table tickets purchased
- the total number of tickets purchased

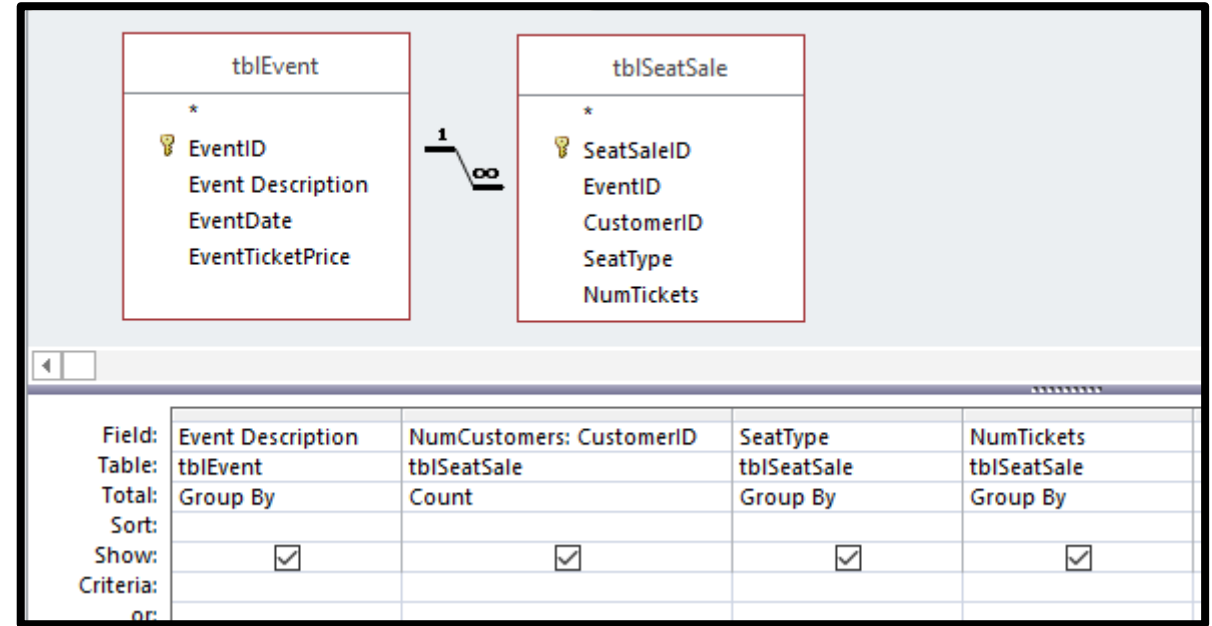
‘How to’ Step 1: The Query

Create this query – which in the next step will be used to create a report.

We will do the calculation for the first bullet point on this query, but will do the other calculations directly on the report.

Click on the ‘Totals’ button to give us the ‘Total’ row in the query (see right). On the ‘Customer ID’ select ‘Count’.

Because there is very little data in our database there are a limited number of customers that have booked – but the results are correct (examine your tblSeatSale to confirm).



| Event Description | NumCustomers | SeatType | NumTickets |
|--------------------|--------------|----------|------------|
| Christmas Songtime | 1 | No Table | 1 |
| Christmas Songtime | 1 | Table | 2 |
| Home Alone | 1 | No Table | 8 |
| Home Alone | 1 | Table | 4 |
| The Polar Express | 1 | No Table | 2 |
| The Polar Express | 1 | Table | 4 |

- c) Create a report that shows ticket sales for the events. For each event calculate:
- the number of customers who have purchased tickets
 - the number of table tickets purchased
 - the number of non-table tickets purchased
 - the total number of tickets purchased

This is what you will create. Look at the bullet points and identify where each of those things are on the report.

‘How to’ on the next few slides.

Display:

- a suitable report title
- the event descriptions
- the number of customers who have purchased tickets
- the number of table tickets purchased for each event
- the number of non table tickets purchased for each event
- the total number of tickets purchased for each event

| Ticket Sales Report | | | |
|------------------------------|-----------------|-------------|------------------------|
| Event Description | Total Customers | Seat Type | Number of Tickets Sold |
| Christmas Songtime | 1 | No Table | 1 |
| | 1 | Table | 2 |
| Total for Christmas Songtime | 2 | | 3 |
| | | | |
| Home Alone | 1 | No Table | 8 |
| | 1 | Table | 4 |
| Total for Home Alone | 2 | | 12 |
| | | | |
| The Polar Express | 1 | No Table | 2 |
| | 1 | Table | 4 |
| Total for The Polar Express | 2 | | 6 |
| | | | |
| Grand Total | 6 | | 21 |
| | | | |
| 21 September 2021 | | Page 1 of 1 | |

'How to' - Report Wizard

Click on the Query (qryRptTicketSales)

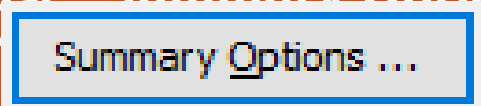
Select 'Report Wizard'



Choose all fields

Group by 'Event Description'

Choose 'Summary Options' and tick



Report Wizard

Which fields do you want on your report?
You can choose from more than one table or query.

Tables/Queries
Query: qryRptTicketSales

Available Fields:

Selected Fields:
Event Description
NumCustomers
SeatType
NumTickets

Cancel < Back Next > Finish

Report Wizard

Do you want to add any grouping levels?

Event Description
NumCustomers, SeatType, NumTickets

NumCustomers
SeatType
NumTickets

Priority

Grouping Options ... Cancel < Back Next > Finish

Summary Options

What summary values would you like calculated?

| Field | Sum | Avg | Min | Max |
|--------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| NumCustomers | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| NumTickets | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

OK Cancel

Show
☒ Detail and Summary
☐ Summary Only

☐ Calculate percent of total for sums

Activity 3: Queries and Report (40 mins) - 12 marks

Initially the report will look like this - adjust in Design View to make it look more attractive. This is where many of the marks will be achieved.

Examine the tools that you can use on the top ribbon in Design View.

| qryRptTicketSales1 | | | |
|---|--------------|----------|------------|
| Event Description | NumCustomers | SeatType | NumTickets |
| Christmas Songtime | 1 | No Table | 1 |
| | 1 | Table | 2 |
| Summary for 'Event Description' = Christmas Songtime (2 detail records) | | | |
| Sum | 2 | | 3 |
| Home Alone | 1 | No Table | 8 |
| | 1 | Table | 4 |
| Summary for 'Event Description' = Home Alone (2 detail records) | | | |
| Sum | 2 | | 12 |
| The Polar Express | 1 | No Table | 2 |
| | 1 | Table | 4 |
| Summary for 'Event Description' = The Polar Express (2 detail records) | | | |
| Sum | 2 | | 6 |
| Grand Total | 6 | | 21 |

Display:

- a suitable report title
- the event descriptions
- the number of customers who have purchased tickets
- the number of table tickets purchased for each event
- the number of non table tickets purchased for each event
- the total number of tickets purchased for each event

| qryRptTicketSales1 | | | |
|---|--------------|----------|------------|
| Event Description | NumCustomers | SeatType | NumTickets |
| Christmas Songtime | 1 | No Table | 1 |
| | 1 | Table | 2 |
| Summary for 'Event Description' = Christmas Songtime (2 detail records) | | | |
| Sum | 2 | | 3 |
| Home Alone | 1 | No Table | 8 |
| | 1 | Table | 4 |
| Summary for 'Event Description' = Home Alone (2 detail records) | | | |
| Sum | 2 | | 12 |
| The Polar Express | 1 | No Table | 2 |
| | 1 | Table | 4 |
| Summary for 'Event Description' = The Polar Express (2 detail records) | | | |
| Sum | 2 | | 6 |
| Grand Total | 6 | | 21 |

For maximum marks you must adjust the report in 'Design View' to make it look more attractive - see next slide.

Close Print Preview (on the right of the screen) and then go to 'View' and 'Design View' (on the left of the screen).



Extension:

- Examine the ‘Properties’ of each component on the report.
- Note that as you click on different elements on the report the properties for that element appear on the right hand side in the Property Sheet.
- To see the properties of the entire form you click on the small square on the top left corner of the report.
- Try to differentiate between a text box and a label. Examine the properties of each to see if you can work out the difference (clue ‘Total Customers’ is a label and



| Property Sheet | |
|-----------------------|------------------|
| Selection type: Label | |
| SeatType_Label | |
| Format | Data |
| Event | Other |
| All | |
| Name | SeatType_Label |
| Caption | SeatType |
| Visible | Yes |
| Width | 1.64cm |
| Height | 0.556cm |
| Top | 0.101cm |
| Left | 10.497cm |
| Back Style | Transparent |
| Back Color | Background 1 |
| Border Style | Transparent |
| Border Width | Hairline |
| Border Color | Text 1, Lighter |
| Special Effect | Flat |
| Font Name | Calibri (Detail) |
| Font Size | 11 |
| Text Align | Left |
| Font Weight | Normal |
| Font Underline | No |
| Font Italic | No |
| Fore Color | Text 1, Lighter |
| Line Spacing | 0cm |
| Hyperlink Address | |
| Hyperlink SubAddress | |
| Hyperlink Target | |
| Gridline Style Top | Transparent |
| Gridline Style Bottom | Solid |
| Gridline Style Left | Transparent |
| Gridline Style Right | Transparent |
| Gridline Width Top | 1 pt |
| Gridline Width Bottom | 1 pt |
| Gridline Width Left | 1 pt |
| Gridline Width Right | 1 pt |
| Top Margin | 0cm |
| Bottom Margin | 0cm |
| Left Margin | 0cm |
| Right Margin | 0cm |
| Top Padding | 0.053cm |
| Bottom Padding | 0.053cm |
| Left Padding | 0.053cm |
| Right Padding | 0.053cm |
| Display When | Always |
| Reading Order | Context |

See if you can find the property that will remove the line around text boxes and labels (Border Style)

Use the ‘Back Color’ property to change the colour of the Report Header.

Activity 3: Queries and Report (40 minutes) - 12 marks

Saving Activity 3 Report

Evidence your report as screenprints on your Notepad. Your screenprints must show:

- the **DESIGN** view of the report you have created, including grouping and calculations
- the **DESIGN** view of any queries you have created and used with the report, including fields and criteria
- the **DATASHEET** view of any queries you have created and used with the report.

Save report evidence as a PDF and attach to your Notepad

Activity 4: Structure Testing (20 minutes) - 6 marks

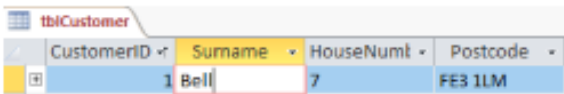
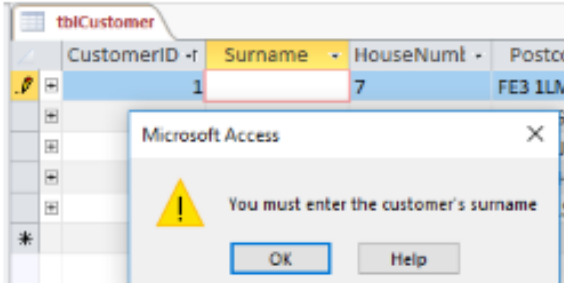
Test the structure of the validation of your relational database using suitable test data (normal, erroneous and extreme as appropriate).

You must provide evidence of table level testing that proves:

1. A record will not save without the surname being present
2. A record will not save if the postcode is not in the correct format
3. A record will not save if the event selected is invalid
4. A record will not save if the seat type is invalid
5. A record will not save if the number of tickets purchased is below the accepted range
6. A record will not save if the number of tickets purchased is above the accepted range

Complete the test log to show how you have tested the structure of your database on your Notepad

Activity 4: Structure Testing (20 minutes) - 6 marks

| Test Number and Field | Type of test (N, R, X) | Test Data | Expected Results | Add <u>Screenprints</u> of the results (including any re-tests). Ensure you show the test data used. | Only complete this column if the results were not as expected. Explain the error. |
|-----------------------|------------------------|--------------------|-----------------------|--|---|
| 1. Surname | N | Bell | Data will be accepted |  | |
| 2. Surname | R | None - leave blank | Unable to save record |  | |

N = Normal Data (correct data)

R = Abnormal Data (incorrect data)

X = Extreme Data (used in range checks to test the extreme range of the data – e.g. boundary data)

Activity 5: Structure Evaluation (20 mins) - 6 marks

Evaluate your database structure. You should consider:

- How well your database structure has minimised data duplication
- How well your database structure meets these requirements:
- There are two types of seat: seats without tables and seats with tables
- There must be at least one ticket purchased with each sale
- A sale cannot exceed eight tickets.

Save your evaluation as a PDF in your folder for submission as

activity5_[Registration number #]_[surname]_[first letter of first name]

Activity 5: Structure Evaluation (20 mins) – 6 marks



Pass

| | |
|------------|--|
| Describe | Give a clear description that includes all the relevant features – think of it as 'painting a picture with words'. |
| Define | Clearly explain what a particular term means and give an example, if appropriate, to show what you mean. |
| Design | Create a plan, proposal or outline to illustrate a straightforward concept or idea. |
| Explain | Set out in detail the meaning of something, with reasons. More difficult than describe or list, so it can help to give an example to show what you mean. Start by introducing the topic then give the 'how or 'why'. |
| Identify | Point out or choose the right one or give a list of the main features. |
| Illustrate | Include examples or a diagram to show what you mean. |
| Interpret | Define or explain the meaning of something. |
| List | Provide the information in a list, rather than in continuous writing. |
| Outline | Write a clear description but not a detailed one. |
| Plan | Work out and plan how you would carry out a task or activity. |
| State | Write a clear and full account. |
| Summarise | Write down or articulate briefly the main points or essential features. |



Merit

| | |
|-------------------|--|
| Analyse | Identify separate factors, say how they are related and how each one contributes to the topic. |
| Assess | Give careful consideration to all the factors or events that apply and identify which are the most important or relevant. |
| Compare/Contrast | Identify the main factors that apply in two or more situations and explain the similarities and differences or advantages and disadvantages. |
| Demonstrate | Provide several relevant examples or related evidence which clearly support the arguments you are making. This may include showing practical skills. |
| Design | Create a plan, proposal or outline to illustrate a relatively complex concept or idea. |
| Explain in detail | Provide details and give reasons and/or evidence to clearly support the argument you are making. |
| Justify how/why | Give reasons or evidence to support your opinion or view to show how you arrived at these conclusions. |

BTEC Command Verbs



Distinction

| | |
|---------------------|--|
| Appraise | Consider the positive and negative points and give a reasoned judgement |
| Assess | Make a judgement on the importance of something – similar to evaluate. |
| Comment | Give your view after you have considered all the evidence. In particular critically decide the importance of all the relevant positive and negative aspects. |
| Criticise | Review a topic or issue objectively and weigh up both positive and negative points before making a decision. |
| Draw conclusions | Use the evidence you have provided to reach a reasoned judgement. |
| Evaluate | Review the information then bring it together to form a conclusion. Give evidence for each of your views or statements. |
| Evaluate critically | Decide the degree to which a statement is true or the importance or value of something by reviewing the information. Include precise and detailed information and assess possible alternatives, bearing in mind their strengths and weaknesses if they were applied instead. |